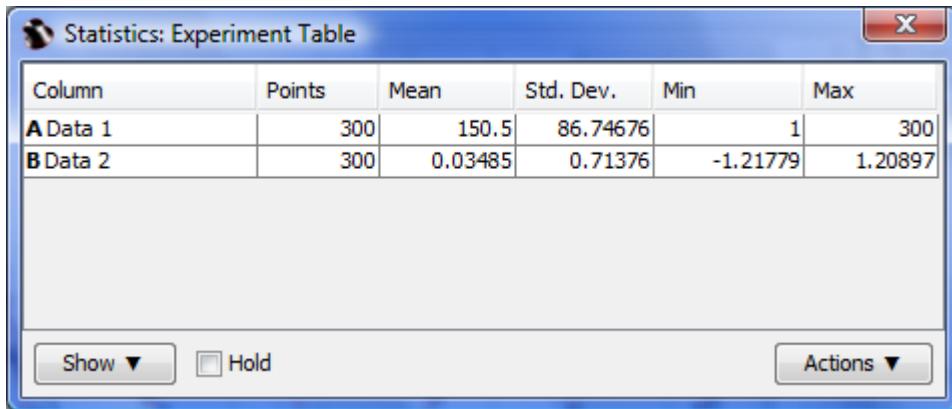


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Descriptive Statistics

Select Tools → Statistics menu item to open the statistics dialog. Statistics dialog shows statistics on currently selected table columns or curves on plot. The statistics is updated every time you activate different windows or change the selection in active window. Select multiple instances in one window (columns or curves) to view multiple statistics data.



Showed Statistical Properties

By default some statistical properties are not shown. Click Show button to select which properties you want to calculate.

Statistical Functions in Column Formulas

You can also calculate statistics on table columns using column statistics functions when entering column formula. See Functions tab in Set Column Formula dialog for column statistics functions description. These functions are also available in MagicPlot Student edition.

Computational Formulas

Central moments are calculated as follows (see table). All sums are calculated using [compensated summation](#). Central moments are calculated on second pass after Mean calculation.

| Property | Formula |
|--|--|
| n | The number of non-empty cells |
| Mean | $\bar{a} = \frac{1}{n} \sum a_i$ |
| Central moments | $\nu_k = \frac{1}{n} \sum (a_i - \bar{a})^k$ |
| MagicPlot uses the following formulas to calculate statistics: | |
| Property | Formula |
| Mean (expected value) | $\mu = \nu_1$ |

| Property | Formula |
|--------------------|--|
| Variance | |
| Standard deviation | $\sigma = \sqrt{\frac{n}{n-1} \mu_2}$ |
| Skewness | $\sigma = \sqrt{\frac{n^2}{n-1} \mu_3}$ |
| Kurtosis | |
| Y Sum | $\gamma_1 = \frac{1}{n(n-1)(n-2)} \left(\frac{n!}{(n-1)!} \mu_4 - 3(n-1) \right)$ |

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